

IX. *A Letter from the Rev<sup>d</sup> Mr. Timothy Neve, Secretary of the Gentlemen's Society at Peterboroug, to C. Mortimer, Secr. R. S. containing his Observations of two Parhelia, or Mock-Suns, seen Dec. 30, 1735. and of an Aurora Borealis, Dec. 11, 1735.*

S I R,

I Send you an Account of two *Phænomena* which I lately saw : The first was on *Tuesday* the 30th of *December* past, as I was riding betwixt *Cherry Orton* and *Alwalton* in the County of *Huntingdon*, I observed two *Parhelia*, the first of which shone so bright, that at first Sight I took it for the real Sun, till looking a little farther on my left Hand, I was convinced of my Mistake, by seeing the true Sun much the brightest in the Middle, and a *Mock-Sun* on each Side, in a Line exactly parallel to the Horizon. I guessed their Distance to be about 40 Diameters of the Sun, or, as they usually appear, 23 Degrees. That on the left Hand of the Sun, when I saw it first, was small and faint, but in about two Minutes time became as large and bright as the other, and appear'd at once as two white lucid Spots on each Side the Sun, East and West, seemingly as big, but not so well defin'd : In about three Minutes they lost both their Colour and Form, and put on those of the Rainbow ; the Red and Yellow in both very beautiful and strong nearest to the Sun, the other Colours fainter. They be-  
came

came as two Parts of an Arch, or Segment of a Circle, with the Concave towards the Sun, only round at Top, the Light and Colours streaming downwards, and tending towards a Point below. This continued for about four or five Minutes, when the Colours gradually disappearing, they became, as before two lucid Spots, without any Distinction of Colours. They lasted a full Hour, sometimes one brighter, and sometimes the other, according to the Variation of the Clouds and Air, as I suppose. When I first saw it, it was exactly a Quarter after Eleven. There had been a Frost in the Morning, which went away pretty soon with a thick Mist, and between 10 and 11 o'Clock clear'd up, leaving only a Haze in the Air behind it: The Weather quite calm, Wind, as I thought, N. W.

These *Parhelia* commonly are seen with a Circle or Halo round the Sun, concentric to it, and passing through the Disks of the spurious or *Mock-Suns*. But there was not the least Appearance of such a Circle here, it having only a Tendency towards one, when it was seen with the Rainbow Colours.

The other Phenomenon was that pretty common one of the *Aurora Borealis*, of which though you have so many exact and curious Accounts in your learned *Transactions*, yet I do not remember any one in the Manner I saw this of the 11th past. A little after five o'Clock, I observ'd the Northern Hemisphere to be obscured by a dusky red Vapour, in which, by Degrees, appear'd several very small black Clouds near the Horizon. I thought it seem'd to be a Preparation for those Lights which afterwards were seen; the first Eruption of which was within a Quarter

ter of an Hour, full East, from behind one of the small dark Clouds, and soon after several others full North. These Streams of Light were of the same dusky red Colour as the Vapour, just appear'd, and vanish'd instantly. I saw eight or ten of these at once, about the Breadth of the Rainbow, of different Heights, several Degrees above the Horizon, and look'd like so many red Pillars in the Air; and no sooner did they disappear, but others shew'd themselves in different Places. In about half an Hour, this Colour of the Vapour gradually chang'd itself towards the usual White, and spread itself much wider and higher; and after that, appear'd as common.

*I am, SIR,*

Peterbourg,  
Jan. 29, 1735-6.

*Your most obedient*

*humble Servant,*

Tim. Neve.

X. *An Observation of two Parhelia, or Mock-Suns, seen at Wittenberg in Saxony, on Dec. 31, 1735. O. S. Jan. 11, 1736. N. S. by John-Frid. Weidler, F. R. S. &c. Translated from the Latin by T. S. M. D. F. R. S.*

TAB. II. FIG. 4.

**T**HIS Day, a little after 10 in the Morning, a Friend told me, that several Suns were to be seen in the Heavens: Whereupon I went directly into the Garden adjoining to my House, and immediately saw near the Sun S, on its Left or Western Side (1) the